When ethanol is available in Hawaii, we'll use it because...

1. **All cars can use it.**
2. **Consumers will benefit.**
3. **Our economy will be stronger.**
4. **Our air will be cleaner.**

Available E85 Flexible Fuel Vehicles (FFVs)

Daimler Chrysler

All 1998-2002 Chrysler 3.3L minivans
All 1998-2002 Dodge 3.3L minivans
All 1998-2001 Plymouth 3.3L minivans
(Plymouth brand discontinued for 2002)
All 2003 2.7L Chrysler Sebring sedans
All 2003 2.7L Dodge Stratus Sedans
Selected 2003 3.3L Dodge Caravan Cargo Vans (late availability)

Ford Motor Company

Selected 1995-2002 3.0L Taurus sedans and wagons
Selected 1999-2002 3.0L Ranger pickups
Selected 2002 4.0L Explorer (spring 2002 production)

General Motors

All 2000-2002 2.2L Chevy S-10 pickups (after Dec '99)
All 2000-2002 2.2L Sonoma pickups (after Dec '99)
All 2002 5.3L Vortec-engine Denalis, Suburbans, Tahoes, Yukons, Yukon XLs
Selected 2002 5.3L Sierra and Silverado 1/2 ton trucks (code #5E5)
All 2003 5.3L Vortec-engine Avalanches

Isuzu

All 2000-2002 Isuzu 2.2L Hombre pickups.
(after Dec '99)

Mazda

Selected 1999-2002 Mazda 3.0L B3000 pickups

Mercury

Selected 2001 3.0L Sables
(denoted by "Road & Leaf")
Selected 2002 4.0L Mountaineers
(spring 2002 production)

Source: Renewable Fuels Association

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Fuel Ethanol:
Coming Soon to a Car Near You

Facts:

1 Your car can use it.

All cars perform well using E10

- E10 is approved under the warranties of all major auto manufacturers marketing vehicles in the U.S. Some even recommend ethanol use for its clean burning benefits.
- Ethanol provides high quality, low cost octane.
- Ethanol-blended fuel keeps your fuel system clean.
- E10 is a blend of 10 percent ethanol and 90 percent gasoline.

Some cars can use E85

- Flexible Fuel vehicles (see list on back) automatically adjust to operate on E85, 100% gasoline or any blend in-between.
- E85 is the term for motor fuel blends of 85 percent ethanol and 15 percent gasoline.

Ford Motor Company

Fuel Cell Vehicles Could Use Ethanol

- Ethanol can be a renewable transition fuel to the “hydrogen economy.”

2 Consumers will benefit.

Ethanol provides a cost-effective alternative – Ethanol is being used throughout the mainland United States. When given the choice, consumers favor ethanol for its cost-effective clean air and high-octane benefits.

Ethanol provides consumer choice – Production of ethanol fuel increases fuel supplies, which means increased competition and, ultimately, lower fuel costs and increased choice at the pumps.

Ethanol is a high performance fuel - Ethanol has a 97 octane rating (113 blending octane).

E10 is projected to cost less:

REGULAR

	100% Gasoline			10% Alcohol (E10)		
Fuel cost	Gal.	$/gallon	$	Gal.	$/gallon	$
Gasoline Used	1.00	$1.051	$1.051	0.90	$1.066	$0.959
Alcohol Used	0.00	n/a		0.10	$1.350	$0.135
Federal Blenders Tax Credit				0.10	$0.530	$0.053
Net Fuel Cost per gallon			$1.051			$1.041
Retailing Cost/Overhead			$0.160			$0.160
Cost Before Taxes			$1.211			$1.201
Federal Excise Taxes			$0.184			$0.184
State Fuel Tax			$0.160			$0.160
State Retail Excise Tax			$0.044			$0.000
County Fuel Tax (Honolulu)			$0.165			$0.165
Retail Price at the Pump			**$1.764**			**$1.710**

PREMIUM

	100% Gasoline			10% Alcohol (E10)		
Fuel cost	Gal.	$/gallon	$	Gal.	$/gallon	$
Gasoline Used	1.00	$1.179	$1.179	0.90	$1.141	$1.027
Alcohol Used	0.00	n/a	$0.000	0.10	$1.350	$0.135
Federal Blenders Tax Credit			$0.000		$0.530	$0.053
Net Fuel Cost			$1.179			$1.109
Retailing Cost/Overhead			$0.160			$0.160
Cost Before Taxes			$1.339			$1.269
Federal Excise Taxes			$0.184			$0.184
State Fuel Tax			$0.160			$0.160
State Retail Excise Tax			$0.056			$0.000
County Fuel Tax (Honolulu)			$0.165			$0.165
Retail Price at the Pump			**$1.904**			**$1.778**

Price projections are based on July 2002 rack prices in Hawaii as reported by the U.S. Department of Energy's Energy Information Administration, Table 31. E10 scenarios assume use of a low vapor pressure blendstock and include an added cost of 2.5 cents per gallon to produce the blendstock. The midgrade octane E10 case assumes use of sub-octane unfinished gasoline priced (before addition of the 2.5 cents) at 1 cent per gallon less than finished regular. The premium octane E10 case assumes use of midgrade gasoline priced 6.5 cents per gallon more than finished regular. Actual prices may vary.

Ethanol supports America’s energy independence and security – Ethanol is an important substitute to imported fossil fuels. Ethanol directly displaces imports of foreign oil and gasoline additives. Increasing the use of domestic ethanol will make America less dependent on foreign oil.

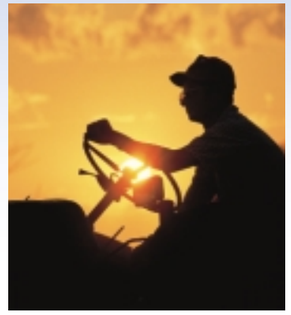
Tripling the use of domestic ethanol would effectively replace current U.S. imports of Iraqi oil.

Hawaii’s ground transportation vehicles are over 99% dependent on imported fossil fuel. Local production of ethanol fuel will provide a local fuel source which can expand to meet future clean fuel needs, while using locally-available agricultural and waste products.

3 Our economy will be stronger.

Ethanol strengthens our economy – The production of ethanol boosts capital investment, economic development and job creation in communities across the United States. Ethanol also lowers the cost of gasoline to consumers. The combined effect is stonger local economies.

Ethanol strengthens agriculture – Increasing ethanol production provides a much-needed economic boost to the domestic agricultural industry. Ethanol has provided a vital value-added market for agricultural byproducts such as sugarcane molasses. Not only have farmers benefited from improved cash flow, an increasing number of farmers are joining together in cooperatives to build ethanol production facilities – thereby directly taking advantage of the value-added market through ownership.



Ethanol can help with waste management – New technology enables the production of ethanol from cellulose feedstocks such as corn stalks, rice straw, sugar cane bagasse, pulpwood, energy cane, and municipal solid waste. This technology offers tremendous opportunities for new jobs and economic growth outside the traditional “grain belt.”

4 Our air will be cleaner.

Ethanol burns cleaner – Ethanol is one of the best tools we have to fight air pollution from vehicles. Ethanol contains 35% oxygen. Adding oxygen to fuel results in more complete fuel combustion, thus reducing harmful tailpipe emissions. Ethanol also displaces the use of toxic gasoline components such as benzene, a carcinogen. Ethanol is non-toxic, water soluble and biodegradable.

Warren Gretz

Ethanol is renewable – Ethanol is a renewable fuel produced from plants, unlike petroleum-based fossil fuels that have a limited supply and are major contributors of carbon dioxide, a greenhouse gas. The ethanol production process represents a carbon cycle, where plants absorb carbon dioxide during growth, “recycling” the carbon released during fuel combustion.

Questions?

Log on to www.hawaii.gov/dbedt/ert/ethanol.html